



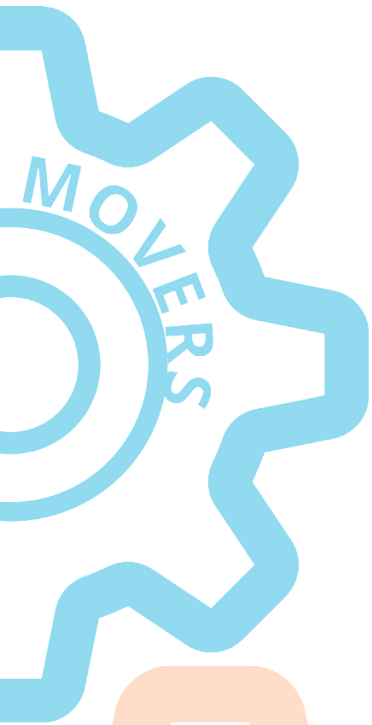
REGIONAL MAKEATHON REPORT

March 2023
Hosted at
Geelong Tech
School



*“The TOM team were fantastic and brilliantly supportive - nothing was too much trouble. The venue was excellent as were the staff. **1000% recommend TOM: Melbourne**”*

~ Shona (2023 Need-Knower)



TOM: Overview

"TOM - Tikkun Olam Makers - is a global movement of communities that creates and disseminates affordable solutions to neglected challenges of people living with disabilities, the elderly and the poor" – www.tomglobal.org

Tikkun Olam, meaning "to repair the world" in Hebrew, inspired the creation of Makeathons by TOM: Global, which are now held locally in Victoria by the TOM: Melbourne team. This event's theme, "Movers and Makers", highlights the sports and recreational themed challenges which were presented, and the passionate spirit of the participants of the event.

What is a Makeathon?

Often described as a *"marathon weekend of making"*, the TOM: Melbourne Makeathon program brings together people with disability who have a specific need ('Need Knowers') and connects them with a multidisciplinary group of volunteer professionals and students with creative design thinking, technical and problem solving skills ('Makers'). Together, they aim to design and build solutions that address a complex problem and improve the everyday life of the Need-Knower.



2023 TOM: Melbourne team

About the 2023 Regional Makeathon

The 2023 Regional Makeathon program consisted of a series of online preparatory sessions (PreTOM and two Design Nights) before the Makeathon weekend itself which was held in-person at the Geelong Tech School on the Gordon Campus in Geelong. For the first time in Australia, a second TOM Regional Makeathon ran concurrently in Wide Bay, Queensland, with both TOM communities addressing Sports & Recreation-themed Challenges for their local Need Knowers.

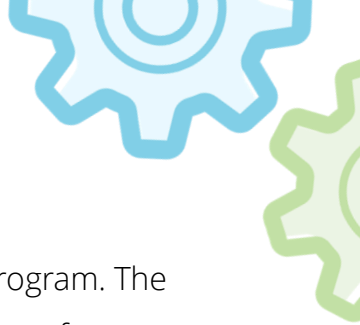
Four teams of Makers and Need Knowers co-designed solutions with the support of TOM Mentors and a Need Kowner Ambassador who shared their expertise and experience with participants throughout the program. On the Sunday evening of the Regional Makeathon weekend, participants and special guests came together for a Showcase presentation of the teams' solutions and to celebrate the impact of the program.

The solutions developed as part of the Regional Makeathon program are continuing to be developed by the TOM Team and volunteers in the TOM community, with the aim of assessing which solutions might be appropriate to progress to product status. The design files for all the solutions will also be uploaded to the TOM: Melbourne and TOM Global website. Video and photo highlights from the 2023 Regional Makeathon and previous Makeathons can be seen on the TOM: Melbourne website :

www.tommelbourne.org/gallery



*Matt Warren, Need-Kowner Ambassador
of the 2023 Regional Makeathon*



PreTOM

1 March 2023

PreTOM is the first preparatory session as part of the Makeathon program. The session aims to facilitate the beginning of the design thinking process of empathising with the user and defining the problem. This year, PreTOM began with an informative and open discussion about Disability Awareness from TOM Need Knower Ambassador, Matt Warren, who shared insights from his lived experience as a person with disability, as well as being a previous Need Knower in the 2022 Makeathon. Leveraging the capabilities of *Zoom*, teams then spent time in virtual breakout rooms getting to know each other and understanding the accessibility challenge presented by the Need Knower.



Design Nights

8 & 15 March 2023

To provide teams adequate time to collaborate and develop their ideas in preparation for the weekend of making, two Design Nights were run in consecutive weeks following PreTOM. During Design Night 1, teams heard from Sue Lord, an allied health professional from the TOM: Wide Bay (QLD) team, who shared some important Inclusive Design tips for the teams to consider when designing for accessibility needs throughout the Makeathon program. Design Nights 1 & 2 involved teams continuing the design thinking process together via Zoom by ideating and brainstorming different design solutions, then planning their approach to the upcoming in-person weekend of making and prototyping in Geelong.



Regional Makeathon Weekend

25 & 26 March 2023

The buzz of the Regional Makeathon weekend filled the Geelong Tech School as teams arrived bright and early Saturday morning to meet each other in-person and bring their designs to life in an intense weekend of making. Across two full days of hands-on prototyping and testing their design, teams co-designed solutions with their Need Knower, seeking feedback and iterating along the way. The four solutions developed in this Makeathon are outlined later in this report.

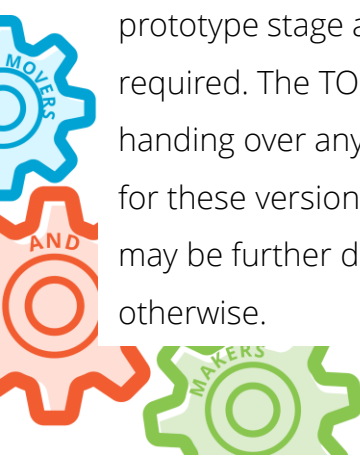
Showcase

26 March 2023

A Showcase was held on the Sunday night of the Makeathon weekend for teams to present their solutions and to celebrate their extraordinary efforts over the weekend. The Showcase was hosted by Vanessa Cohen, passionate TOM supporter, who also encouraged each team to reflect on the personal and broader impact that this experience had on them and the community. A special video message was also shared by TOM Founder, Gidi Grinstein, who congratulated all the participants and reminded everyone of the incredible global impact these solutions would have as part of the worldwide TOM community. It was an inspiring way to wrap up the Makeathon weekend and commemorate every participants' dedication and passion throughout the program alongside TOM: Melbourne's Sponsors, Supporters and Community Partners.

Next Steps

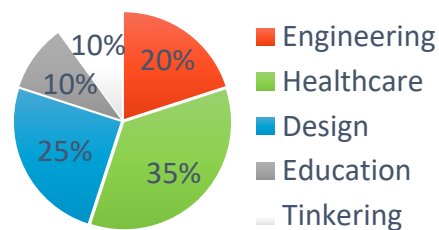
Some solutions required additional modifications to get them to a working prototype stage and this was coordinated by the TOM Team with each group as required. The TOM Team also perform a risk assessment of each solution before handing over any prototypes to the Need Knowers for use. The Digital Product Files for these versions of the solutions will be uploaded to the TOM Global website and may be further developed and iterated in future, either through TOM programs or otherwise.



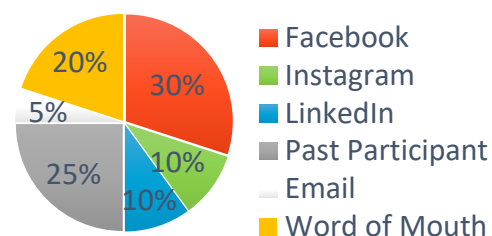
Event Statistics

The 2023 Regional Makeathon program attracted 23 Maker applications and 9 unique accessibility challenges to be considered for the program. A selection process was undertaken to ensure the teams comprised of participants with a range of skills and experience. Diversity across and within the teams was important for the success and impact of the solutions developed and overall participant experience. 15 Makers were selected to work with 3 Need Knowers for the program. This year's event saw almost all of the Makers come from professional level experience in their fields. Teams spent more than 23 hours across the entire Makeathon program to co-design and build their solution to a "sports and recreation" themed challenge. Many participants contributed additional hours and resources to the program, choosing to work on their team's solution in their own time beyond the sessions organised by TOM: Melbourne.

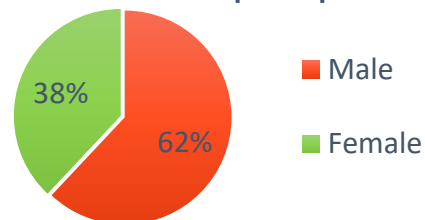
Makers' background



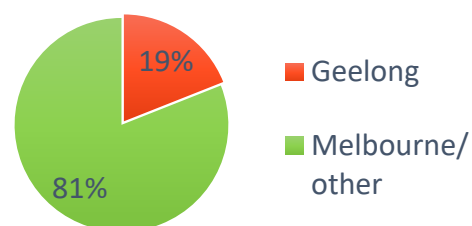
How participants joined



Gender of participants



Travel location



Online Engagement

Connecting with the wider community online was done through targeted social media campaigns and published content which saw significant increases in reach across the TOM: Melbourne social media platforms. Content from the TOM: Melbourne Facebook page was seen by over 100,000 people across the program timeline (December 2022 to mid-March 2023), and by over 6,700 people on Instagram for the same time period. There was also increased traffic to the TOM Makeathon website during the lead up to the event, with over 1,600 visits to the page. The site was used extensively throughout the program timeline as it contained key event information and direct links to prospective participants to apply for the Makeathon program.

Team 1

LED CAR RACING GAME



Challenge

Team 1 sought to recreate the traditional slot car racing game with larger, more accessible controls and inputs to suit limited mobility. The team was designing for an adaptable solution which can be modified to suit varying needs.

Solution

Team 1 created an accessible, 2-player LED car racing game. The design is based on an LED strip with coloured lights representing the cars. It can be set up anywhere, has original sound-effects and features a large button controller.



"I learnt how much is taken for granted with the privilege of being able-bodied and neurotypical. Small things [become] inaccessible because the designers did not need to think about how a person might not be able to do it."

- Vanessa (Maker, Team 1)

Team 2

PORTABLE MOBILITY TRIKE



Challenge

Rose is a delightful 10 year old girl who loves to ride her trike. Her mobility challenges result in her not being able to walk easily or very far. Whilst Rose and her family have several mobility aids they use, none of them meet all their needs and one of the biggest issues is the portability of these aids when they travel.



“The collaborative nature of the work, the interest, commitment and dedication of the team to deliver a solution - they went above and beyond!”

— Shona (Need-Knower, Rose’s Mother)

Solution

Team 2 continued to develop the portable mobility trike originally designed by team member, Mo, as part of a TOM @ University project in 2022. The trike was designed to be foldable and has a detachable handle at the back, allowing Rose’s parents to hold on to the trike while in motion.



This report contains descriptions of the solutions as they were at the end of the Makeathon program timeline and some solutions may still be in review by the TOM Team.

Team 3

TRAVERSING A CLIMBING GYM MAT – “HOVERKART”



Challenge

Julie is a very skilful and passionate indoor rock climber who has multiple sclerosis and uses a wheelchair. The fall mats positioned underneath the rock climbing walls are too soft to allow her wheelchair to move across. Julie challenged the team to develop a solution to help her traverse the mat without her wheelchair.



Solution

Team 3 created a ‘HoverKart’ allowing Julie to comfortably transverse across the gym mat and reach the climbing wall without expending excess energy before the climb. The concept involves a Go-kart frame attached to a hoverboard with handles either side to control the device. The team intends to further develop this unique concept through the TOM Global Innovation Challenge.



“The making weekend allowed full immersion into the project without distraction of other every day tasks and activities. Everybody was focused on the task at hand and so a lovely comradery developed within the team”

~ Julie (Team 3 Need-Knower)

This report contains descriptions of the solutions as they were at the end of the Makeathon program timeline and some solutions may still be in review by the TOM Team.

Team 4

POWERCHAIR HOCKEY T-STICK



Challenge

Shaun is an enthusiastic powerchair sportsman who wishes powerchair hockey was more accessible for others too also enjoy the sport. A significant barrier to entry is equipment availability, modularity and cost. In powerchair hockey, T-stick players use a chair mounted blade to manipulate the ball which are very expensive, making it inaccessible for those who want to try the sport.

"There's a space for everyone in the Makeathon and it's just an amazing opportunity to meet so many people and do some really impactful work. ."

~ Sarah (Maker, Team 4)

Solution

Team 4 created a Hockey Stick for powerchair sports to fit various day chairs. The device sits below the cushion on the wheelchair seat pan using modular adjustable V-slot pieces that can attach to the seat and the T-stick. This prototype allows more people to experience powerchair hockey and get involved in the sport.



Regional Makeathon in the media

Leveraging a variety of media formats to promote and share the Regional Makeathon lead to exposure for the program and both TOM: Melbourne (VIC) and TOM: Wide Bay (QLD) organisations. Media coverage was achieved across radio, television and newspaper formats throughout the program across Queensland and Victoria. The campaign reached hundreds of thousands of people and showcased the stories of Makers and Need Knowers involved in the Makeathon.



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Makeathon seeks solutions for people living with disability

BY LUCY CROOK

Makers will gather in Geelong this weekend to seek solutions to challenges faced by people living with disability.

For the first time in Australia, the Saturday, March 25, and Sunday, March 26, Tikkun Olam Makers (TOM) event, is running two simultaneous Regional Makeathons in Geelong, and Wide Bay, Queensland.

The events will occur on the same dates and times, allowing teams from both Makeathons the opportunity to connect virtually throughout the program.

Founder and Director of TOM: Melbourne, Debbie Duxon, said the Makeathons will tackle issues with no device or current solution in the market connecting people with disability who have a specific need, 'Need-Knowers' and with Makers with skills and knowledge to find solutions.

"We are extremely excited about the upcoming TOM: Melbourne 2023 Regional Makeathon and the prospect of working with our fabulous teams of Makers and Need Knowers to design and create customised and affordable assistive technology," Duxon said.

Makers may include anyone from professionals to university students, working and studying in the disciplines of engineering, industrial design, allied health, trades and more.

Originating in Israel in 2014, the phrase Tikkun Olam is roughly translated as 'repairing the world'. TOM has since sprung up in over 70 communities across 10 countries, creating more than 600 unique solutions for Need-Knowers around the globe.

Community Lifestyle Support Speech Pathologist and TOM: Wide Bay Makeathon Mentor from Bundaberg, Sue Lind said the event will benefit the lives of individuals with any impairment.

"TOM Makeathon is a unique opportunity for an individual with any impairment who struggles to access sports or recreation activities to have a piece of customised equipment designed and built specifically for them," she said.

The Makeathon will run from Saturday 25 to Sunday 26 March, with a showcase on the Sunday giving teams the opportunity to explain how their solutions will assist in overcoming the Need-Knowers' unique challenge.

The Showcase will be live streamed via TOM's online channels from 5:30-6:30pm, Sunday 26 March.

For every solution found at the Makeathon, intellectual property will be shared through open-source digital Product Files, enabling other Makers around the world to create solutions for Need-Knowers in their own communities with no cost for the IP.

For more information on the event head to www.tommelbourne.org



Through their Makeathon events TOM creates and builds bespoke assistive technology solutions aimed at improving the lives of people living with disability. RIGHT: A TOM: Melbourne makeathon hosted in 2022. Photos: SUPPLIED



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Designing an easier life

Truganina resident and industrial designer Iva Klavnska was among the 'makers' on deck at the Tikkun Olam Makers Melbourne event in Geelong.

As part of the event on Saturday, March 25 and Sunday, March 26, she was paired with a 'need-knower' – people with disability who have a specific need.

Ms Klavnska said she was excited to use her skills to help someone.

"I applied because it was a great opportunity to use my skills to come up with a design solution to make a real difference to someone's life as well as challenging myself with a new type of design project," she said.

I enjoy creating things with my hands, so that was another reason that this program appealed to me.

Working together in teams with people from different disciplines and backgrounds sounded great too, to be able to bounce off each other's experience and ideas."

Ms Klavnska said she was passionate about

ensuring the end product of any design works as best as possible.

"One of the most important aspects during the design process is to ensure that the end product will work well for the end user," she said.

"I also really liked that the end design becomes open-source and can be freely reproduced by anyone."

TOM: Melbourne founder and director Debbie Duxon said the design aimed to create customised and affordable assistive technology for the 'need-knowers'.

"We are extremely excited about the upcoming TOM: Melbourne 2023 Regional Makeathon and the prospect of working with our fabulous teams of 'makers' and 'need-knowers'," she said.

TOM originated in Israel in 2014, with the phrase 'Tikkun Olam' roughly translating to 'repairing the world'.

Details: www.tommelbourne.org



Wyndham-based industrial designer Iva Klavnska is taking part in an assistive technology event, creating a prototype to help improve the life of someone with a disability. (Geelong Times) 324142_03

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See the TOM: Melbourne website for more:

<https://www.tommelbourne.org/latest-news>



Impact Evaluation & Feedback

The Makeathon program was evaluated for its impact and feedback was collected from Makers and Need Knowers. Quantitative and qualitative data was collected and analysed from program participants, the TOM Team, suppliers and other stakeholders of the Makeathon to capture a wholistic view of the program.

The evaluation had a well balanced mix of positive and constructive feedback which has been reflected upon to ensure continuous improvement for future programs. The feedback surveys demonstrated an overall positive and enjoyable experience had by participants, with recurring themes identified throughout.

Average response ratings from participants

NEED KNOWERS

MAKERS

"I am satisfied with the solution my team created"

3.6 / 5

4.5 / 5

"I enjoyed working with my team"

4.1 / 5

4.5 / 5

"I would recommend the Makeathon to others"

4.6 / 5

5 / 5

Recurring key themes from survey responses

Organisation and event support

Learning and skill-building

Empathy and perspective-taking

Teamwork and collaboration



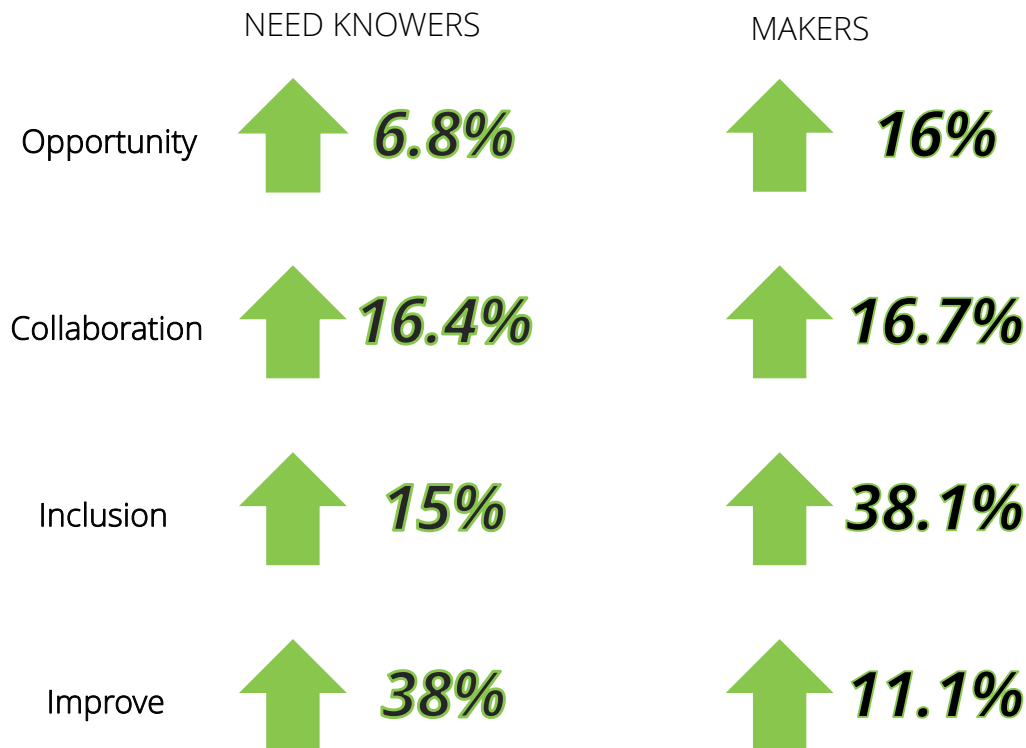


Participant Surveys

Formal evaluation surveys were issued to Makeathon Need Knowers and Makers before PreTOM ("Pre-Program Survey") and at the conclusion of the Makeathon weekend ("Post-Program Survey"). The purpose of capturing data before and after the event is to be able to measure changes in the response data and evaluate the impact of the Makeathon event.

TOM: Melbourne's organisational Outcome Themes of *Opportunity, Collaboration, Inclusion and Improve* were used to develop the survey questions. This enabled targeted evaluation against each theme that collectively contributes to the objectives of the Makeathon program and the mission of TOM: Melbourne. The percentages below show an overall increase in all the outcome theme areas for all participants, demonstrating the positive impact of the Makeathon program.

% increase of Pre and Post-Program ratings for each TOM Outcome Theme





Thank You

We thank the mentors, staff and volunteers that contributed their time and energy to ensure the success of the March 2023 Regional Makeathon.

TOM Team

Monique Lautee

Alison Von Moger

Jaime Hislop

Ava Bennett

Riona Elsous

TOM Mentors

Charlie Davine

Desiree Riny

Hassan Malik

Narelle Hinkley

Rebecca Scott

Geelong Tech School

Leanne Collins

James Collins

Kellie Andrews

Lachlan Patrick

Paul D'Orio

Rachel Gibson

TOM Board

Debbie Dadon

Arechea Hounsell

Genevieve Timmons

Mandy McCracken

Need Kowner

Ambassador

Matt Warren

Event Volunteers

JP (Good Cycles Geelong)



Thank You

To our Sponsors and Supporters



Erdi Foundation



EM Horton Family Fund



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Debbie Dadon AM

2023 Regional Makeathon Sponsors and Supporters




2023 Regional Makeathon Venue Partner

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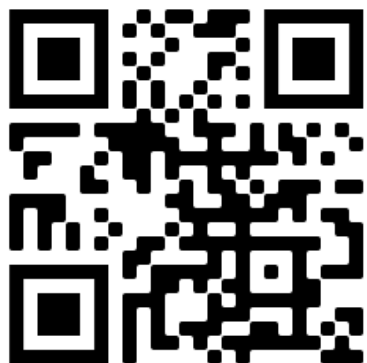
Thank You

To our Community Partners





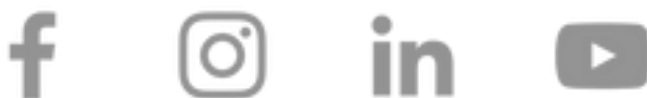
Join the TOM community and stay in touch!



<https://www.tommelbourne.org>

info@tommelbourne.com.au

Keep up to date on the socials
@tommelbourne



Tikkun Olam Makers

TOM: Melbourne



*“The [Makeathon] event was a great opportunity to meet people from different backgrounds and broaden your horizons. Great event that **I will always remember fondly.**”*

~ Kabir (2023 Maker)

